

Our Future Together



ABOUT THE INSTITUTE OF SINGAPORE CHARTERED ACCOUNTANTS

The Institute of Singapore Chartered Accountants (ISCA) is the national accountancy body of Singapore. ISCA's vision is to be a globally recognised professional accountancy body, bringing value to our members, the profession and wider community. There are over 30,000 ISCA members making their stride in businesses across industries in Singapore and around the world.

Established in 1963, ISCA is an advocate of the interests of the profession. Possessing a Global Mindset, with Asian Insights, ISCA leverages its regional expertise, knowledge, and networks with diverse stakeholders to contribute towards Singapore's transformation into a global accountancy hub.

ISCA is the Administrator of the Singapore QP and the Designated Entity to confer the Chartered Accountant of Singapore - CA (Singapore) - designation.

ISCA is an Associate of Chartered Accountants Worldwide – supporting, developing and promoting over 325,000 Chartered Accountants in more than 180 countries around the world.

For more information, visit www.isca.org.sg.

ABOUT THE INSTITUTE OF CHARTERED ACCOUNTANTS IN ENGLAND AND WALES

ICAEW is a world leading professional membership organisation that promotes, develops and supports over 145,000 chartered accountants worldwide. We provide qualifications and professional development, share our knowledge, insight and technical expertise, and protect the quality and integrity of the accountancy and finance profession.

As leaders in accountancy, finance and business our members have the knowledge, skills and commitment to maintain the highest professional standards and integrity. Together we contribute to the success of individuals, organisations, communities and economies around the world.

Because of us, people can do business with confidence.

ICAEW is a founder member of Chartered Accountants Worldwide and the Global Accounting Alliance.

**www.charteredaccountantsworldwide.com
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Foreword

There is nothing permanent except change. This was how Heraclitus, an ancient Greek philosopher who lived about 100 years before Plato, saw the world.

Humans often dislike change. We find change disruptive and at times, intimidating. The natural human tendency is to resist change. However, people who fight change, quite often find themselves becoming or made obsolete and redundant. Those who accept and embrace change are usually capable of turning adversaries into new opportunities.

Is accepting change sufficient to keep the accountancy profession in the game? The answer is no. Change today is occurring at accelerating speed. Before we can understand and respond to a specific change and its implications, it would probably have already unsettled the state of affairs. When news broke that Google's AlphaGo supercomputer had defeated a grandmaster of the game Go, it signalled that science and technology has reached new heights and in turn, opened new frontiers for the future. For this reason, change is now popularly called "disruptors".

To remain relevant to tomorrow's world and to stay ahead of the game, the accountancy profession should learn to "disrupt" itself to pre-empt the implications of change. Being proactive will help the accountancy profession to stay in and ahead of the game.

Gerard Ee
President
ISCA

Digitalisation of accounting information in the last two decades has changed and improved how accountants work. The advancement of technology has freed accountants from the drudgery of menial and mundane tasks, enabling them to perform more thoughtful work such as analysing and advising enterprises on the financial implications and impact of various business decisions. The future is getting even more exciting as technology becomes more adept in machine-learning and develops intelligence surpassing the complex human brain. The ability to solve unstructured problems and making judgements may no longer be the defining qualities of humankind.

"Our Future Together" was jointly organised by the Institute of Singapore Chartered Accountants (ISCA) and the Institute of Chartered Accountants in England and Wales (ICAEW) to encourage thought leadership in the future of the accountancy profession in Singapore and beyond. We hope that this publication would inspire professional accountants to critically think about what the future holds for Singapore and the accountancy profession.

We would like to thank our participants whose generous insights enriched the discussion on our future and made the event a success.

Andrew Ratcliffe
President
ICAEW

Shaping Our Future Together



Singapore commemorated its 50th anniversary of independence in 2015 with SG50 celebrations. As we celebrated 50 years of resolve and resilience to survive as one people, one nation, one Singapore, SG50 also marked the beginning of a new chapter for Singapore. Singapore is now at a turning point with new drivers of change, new challenges and new opportunities confronting us.

As we embark on our next 50 years of nation building, we need to critically think about the future and plan ahead. Proactiveness is the key to survival in today's rapidly changing world.

Prime Minister Lee Hsien Loong announced on October 2015 that the Government will set up a Committee on the Future Economy (CFE) to chart the Republic's economic direction ahead. The vision is to develop a vibrant and resilient economy with sustainable growth that creates value and opportunities for all in Singapore. A key focus area of CFE will be how to transform the Singapore economy from "value-adding" to "value creating" as we become a mature economy, a common characteristic of many developed countries.

The newly-formed Committee comprises 30 members, including government officials and leaders of companies large and small. At its first meeting on 11 January 2016, the Committee discussed and endorsed the five key areas of work that it would embark on to set the direction for Singapore's future economic development. These areas are namely:

- Future Jobs and Skills
- Future City

- Future of Connectivity
- Future Growth Industries and Markets
- Future Corporate Capabilities and Innovation

The five areas are crucial to sustaining economic growth vital to Singapore's future. The CFE and its five subcommittees will draw on a wide range of expertise across both the public and private sectors, and will be engaging with stakeholders and the public to get a good representation of views.

"Our Future Together" Conversation

The confluence of disruptive forces such as accelerating technology change, a rapidly ageing population, cosmopolitan population, globalisation, urbanisation, and terrorism are re-shaping Singapore's future economy. The future of the accountancy profession is deeply intertwined with Singapore's future economy. The "new economy" of the future presents new challenges and opportunities to Singapore and the accountancy profession.

As the national accountancy body, ISCA has a role to play in getting the Singapore accountancy profession to critically think about what the Singapore economy and the world will be like in the next fifty years.

In this regard, ISCA and ICAEW jointly organised the thought leadership event "Our Future Together" on 1 June 2016. This initiative was in accordance with our memorandum of understanding signed in 2015 to combine our respective strengths, to provide insights and to help solve the many pressing issues faced by the accountancy profession locally and regionally.

Over 40 participants - from accounting and other disciplines such as medicine, law, information technology (IT), human resources - gathered to share their thoughts and views on the future of the accountancy profession in Singapore. In particular, the participants discussed and debated on the following three of the five key areas of the future economy:

- Future Corporate Capabilities and Innovation
- Future Growth Industries and Markets
- Future Jobs and Skills

Singapore's young are our future and they will be the leaders of tomorrow. An exclusive event for accountancy students from the following local universities was jointly organised on 30 May 2016 by ISCA and ICAEW to hear

what our next generation of accountants has to say about the future of the profession:

- Nanyang Technological University
- National University of Singapore
- SIM University
- Singapore Institute of Technology
- Singapore Management University

The takeaways from the above events will be shared with the CFE as part of our advocacy efforts for the Singapore accountancy profession.

We have captured below the interesting insights on the future of the accountancy profession provided by our participants.



Key Insights

The below are the initial thoughts gathered through the discussions about the role of the accountancy profession in shaping and delivering the economic goals of Singapore and how we must adapt in order to do that. This marks the beginning of a process of open enquiry by our two institutes. We welcome engagement from all quarters to take the discussion forward.

Accountancy Sector

- **Capabilities Beyond Conventional Accountancy Services**
 - Future specialisations: Accountants are capable of providing beyond traditional accounting services such as business valuation, risk management, strategic planning and performance management.
 - Professional accountancy organisations should identify the new knowledge and skill sets that their members need to remain relevant to the future and develop the resources to help future-proof their members.
- **Accounting as a Global Business Language**
 - Promote sustainability reporting: In line with Singapore's aspiration to be a leading global accountancy hub in the region, the accountancy sector can take leadership in developing sustainability reporting, which is a global initiative, into a common business language in the region.
- **Millennial Accountants: Working in the Public Interest**
 - Be active global citizens: Accountants can play a greater role in taking part in discussions and contributing to decisions that affect global developments, such as global warming and income inequality.

Standard Setters and Regulators

- **Standards and Regulations to Keep Pace with Technology**
 - Standard setters and regulators need to consider and keep pace with technological developments, such as data analytics, blockchain and cloud technology.

Employers

- **New Strategy Needed: Talent Attraction and Retention**
 - Overhaul of profession's image: The accountancy sector especially the accounting firms faces a real talent drain issue. Employers should provide opportunities for the young's strong desire to contribute meaningfully and be a valuable team member rather than just be a "cog in the machine".

Accountants

- **New Job: Designer of Automation**
 - Accountants will probably have to know how to design automation in their work to increase their productivity.
- **Capture Business information in its Widest Possible Sense**
 - Accountants need to have a working knowledge of other business functions to become effective strategic advisors to businesses.
- **A Role for the Human Accountant Remains**
 - The real value of the accountancy profession lies in the integrity and ethics of accountants.

Education

- **Social and Soft Skills Important**
 - Students need to develop soft skills such as negotiation, leadership, teamwork and cross cultural competency.
- **Cross-Disciplinary Accountancy Education**
 - Accountancy education should include cross-disciplinary subjects, for example psychology, information technology (IT) skills and human resources, to broaden the perspective of our next generation of accountants.
- **Higher Order Thinking Skills For the Future**
 - Our education sector must develop the higher order thinking skills of the young to enable them to navigate the volatile and unpredictable future. There is a need for everyone to embrace lifelong learning and build up transferrable skills for the future.

Future Accountants: A Snapshot

Hi, my name is Sava. I'm a Forensic Accountant in year 2030.

I specialise in identifying and investigating fraud.

Today, I am having a teleconference with my regional team members based in Vietnam, Indonesia and Thailand.

My tech glasses is providing live feeds and real time data. It also highlights exceptions which I can quickly zoom into and provide my boss and client with deeper analysis. This helps me to focus on the possible areas to investigate further.



My name is Xin Hui
and I'm a CFO in
Singapore.

I am currently examining
the model and assumptions
used in forecasting my company's
year-end sales figure.

Technology has helped me pull
together the financial and non-financial
information to make more informed
assumptions. I have to continually
exercise sound judgment, with ethics and
integrity as a professional accountant.

Thanks to technology, I get to enjoy the
flexibility to work with global clients
from the comfort of my home.



Future Corporate Capabilities and Innovation

At an industry forum organised by Economic Society of Singapore in October 2015, Trade and Industry Minister S Iswaran said that Singapore needed to shift away from adding value to creating value to capture opportunities and stay ahead of competition. There is an imperative need for businesses to develop strategic corporate capabilities and innovation as domestic constraints are tightening and technological trends are poised to disrupt existing business models.

The CFE is looking for strategies to enable companies and industries to develop innovative capacities, and use technology as well as new business models and partnerships to create value. In this regard, the CFE has set up a dedicated Working Group to develop strategies

to position Singapore's Legal and Accounting Services sectors well for the future.¹

Capabilities Beyond Conventional Accountancy Services

When asked what capabilities and innovation would help the accountancy sector to maintain and increase its competitive edge in the future, several participants pointed out that accountants are capable of providing other services such as business valuation, risk management, strategic planning and performance management. In fact, they noted that accountants are increasingly called upon to provide such services.



ISCA Advisor Teo Ser Luck who attended the event cautioned the participants on the impact and implications of the disruptive changes.

“The role of accounting professionals will continue to evolve with time and changes in technology. To succeed, they must embrace change and acquire new skills, to be able to move up the value chain. If they choose to do nothing, they will not only stagnate but will fall behind, making it much harder to catch up. Therefore, we must prepare ourselves for changes and seize every opportunity to develop and evolve our skillsets, so that we continue to remain relevant.”

¹ <https://www.mlaw.gov.sg/content/minlaw/en/news/press-releases/working-group-set-up-to-position-singapores-legal-and-accounting.html>



Mr Gerard Ee, President of ISCA highlighted that,

“The Institute’s job is to look at the new knowledge sets that an accountant requires to remain relevant and to ensure our members have access to training itself. New areas of specialisation such as forensic accounting, valuation and risk management has arisen. Over time, other areas will develop as new opportunities for the accountant to explore.”

New Business Models Disrupt the Incumbents

Technology is one of the key drivers in re-defining the world we live, work and play in. With connectivity through our smartphones, we can conveniently buy things online anytime and anywhere, make inexpensive overseas calls via free Whatsapp calls and retrieve the latest financial information of a business from the cloud.



Technology has resulted in the change of business models and processes. Unlike conventional business models which were largely reliant on businesses owning assets, business models in today’s sharing economy are based on the platform strategy, which allows individuals and groups to make money from underused assets.² For instance, many homeowners across the world have used the popular platform Airbnb to rent out their properties mostly to holidaymakers looking for a short-term stay within the local community.

There is also great emphasis placed on digitalisation³. From the latest cloud accounting to blockchain technology, these changes are fast shaping how accountants create value at work, in the business and society. For example, cloud-based accounting software like QuickBooks and Xero enable businesses to stay connected to financial data that is stored online anytime, anywhere and from any device with an internet connection. Through a snap of an expense receipt, the cloud accounting software automatically records the transaction to the online accounting system. The accountant can then verify the information and confirm the entry. The introduction of cloud-based accounting is making the job of book-keepers redundant.

On the bright side, this drastically cuts the time and cost of routine work, which in turn, frees up time for the accountant to provide more in-depth and timely financial expertise to help businesses navigate today’s volatile business landscape.

² <https://www.pwc.com/us/en/technology/publications/assets/pwc-consumer-intelligence-series-the-sharing-economy.pdf>

³ Digitisation is converting analog information into digital information, while digitalisation is using digital technologies to change a business model.

Standards and Regulations to Keep Pace with Technology

The rapid advances in technology have streamlined manual and routine processes. As more companies adopt technology and with more digitised data, there is increased potential for greater use of data analytics in audit. The power of data analytics could make it possible for auditors to carry out audits by interrogating complete sets of data, rather than just testing samples. Currently, the use of data analytics in the audit of financial statements is at an early stage.

In light of these developments, a participant highlighted that the International Auditing and Assurance Standards Board (IAASB) has set up a Data Analytics Working Group (DAWG) which seeks to explore and understand how the use of technology and more specifically, data analytics, is able to enhance audit quality in an increasingly technology driven environment.⁴ It would be important to understand how audit data analytics (ADAs) techniques are different from the audit evidence gathering techniques that exist today. This would help us understand the potential impact of ADAs on the development of International Standards of Auditing. Audit standard setters and stakeholders, particularly practitioners and audit oversight bodies, need to work together to keep pace in addressing technological developments.

New Job: Designer of Automation

Given that technology is ultimately invented by humans, the role of humans in the future may well be to assume the responsibility as the designer of automation. The design of the system includes ensuring control mechanisms are in place with designed validations incorporated into the system.



In the case of the accountancy profession, accountants need to teach the machine and over time, the machine learns. For example, a leading-edge tool by one of the Big 4 Firms uses cognitive technologies to perform audit of electronic documents. The tool “learns” from every human interaction and leverages advanced machine learning techniques to automatically identify and extract key accounting information from any type of electronic document, allowing for a historically time-consuming process to be completed quickly and easily.

Using the concept from knowledge management theory, accounting knowledge has two parts – codified knowledge embodied in accounting standards, and tacit knowledge gained through experience. As business transaction becomes more complicated, accounting standards are modified to better capture the economic substance of the transaction. However, some of the knowledge remains tacit in nature and not captured in the standards. The tacit knowledge will be the important role that accountants play.



Technology Boosts Corporate Capabilities

A high performing finance function is one of a business's key corporate capabilities. However, technology is a double-edged sword. On one hand, technology can lead to a loss of current jobs. This is commonly known as “technological unemployment”. On the other hand, technology can enhance transparency, accuracy and communication of information. The additional information provides opportunities for accountants to create value through predictive analytics coupled with business knowledge.

For example, cloud-based accounting software has enabled accountants to spend more time on analysing financial data rather than recording manual entries. It has also allowed users of financial data to access the information more easily and on-demand. In today's highly competitive and fast changing business environment, businesses need to make informed decisions fast.

Further, technology can help accountants to quickly sieve through massive amounts of data collected and identify meaningful patterns and trends. With today's level of technology, this can be achieved at a fraction of the time and costs. Previously, it would have been humanly impossible to do so. Armed with advanced technological tools and a keen understanding of their business, accountants are able to perform higher-value work such as data analysis and business strategy. This will further strengthen the accountant's role as a strategic business advisor in their organisation. Amidst these changes in job roles, accountants will have to acquire new skills and competencies to stay relevant.

⁴ <https://www.iaasb.org/projects/data-analytics>

Future Growth Industries and Market

The future beyond SG50 is a new terrain as Singapore faces new challenges in renewing and growing its economy. Singapore is a small domestic economy limited largely by its shrinking and ageing population. To address the issue of stagnating and declining demand in Singapore, companies need to look at the world as a global village with more than seven billion people, rather than just Singapore with slightly more than five million people.

Companies need to consider tapping on emerging markets that have growth opportunities. The increasing interconnected world provides Singapore with greater opportunity to export its products and services more easily to the world.

Globalisation will promote greater ease in capital, people and information flow. It also allows for our Singapore talent to broaden their horizons, with increasing mobility and exposure to working across different continents and cultures. Like a coin with two sides, globalisation has also intensified competition for businesses and talent.

As Singapore develops growth strategies to position well for the future, how can accountants take the front seat to drive sustainable growth and seize opportunities in a global marketplace?

Accounting as a Global Business Language

Accountants are communicators of business information. With globalisation, information will be trans-border and the need for common standards and systems, spoken through a common language, is ever more important.

Companies need to be more innovative to win in an increasingly competitive global market. In the past, there were more tangible assets and financial reporting had adequately captured the economic substance of a company. However, in this new digital world, there are more intangibles and with platform strategy as previously mentioned, non-financial information is increasingly becoming important.

As one of the top financial centres in the world, Singapore can take leadership in developing sustainability reporting, which is a global initiative, into a common business language in the region. This would help companies lay the

foundations necessary to facilitate the adoption of <IR> or Integrated Reporting in the future.

Capturing Business Information in its Widest Possible Sense

Traditionally, accountants have been applying accounting estimates to financial statements and reviewing historical accounting information. Accountants have tended to measure value using monetary terms which were easily measurable. However, there is now an enlightened understanding that the concept of value goes beyond monetary value, for example natural resources, social and human capital. The additional data that we are able to capture through technology provides the opportunity to capture data that is much richer, broad based and with a higher predictive capability which sharpens business decisions and strategy. Future accountants have the opportunities to produce and capture business information that is predictive of the future in its widest possible sense. In the words of Mr Andrew Ratcliffe, ICAEW President at the panel discussion,

“Proper accounting starts now.”



Future Jobs and Skills

The forces of change, especially technological change and globalisation, in the next five decades present a mixed bag of great opportunities and threats to the profession. How can the profession build on its strength as experts in financial and accounting and develop, new skills, to be ready for the jobs of tomorrow?

The opportunities and threats on jobs can be viewed from three key perspectives: job destruction (or elimination), job creation and the change in job tasks. Job creation and the change in job tasks are closely linked to new skills for the future, which begs the question of how to acquire them.

We should look at the technological advancement of removing menial work as a positive development. It can improve productivity for accounting work, which is an advantage considering the trend of rising education level of Singaporeans over the years. Accountants can move up the value-chain only if they are not weighed down by the drudgery of menial work.

The threats and opportunities arising from real disruptive technology is challenging to predict. This is because technology changes the economic basis of the sector resulting in a fundamental shift. The blockchain technology, which has the capability to become a trusted public ledger of secure accounting information, is potentially a disruptive technology that could change accounting radically. The only skill that can prepare us for a disruptive change is lifelong learning. This is key to helping us quickly adapt to the new normal, come what may.

A Profession Differentiated through Trust, Integrity and Ethics

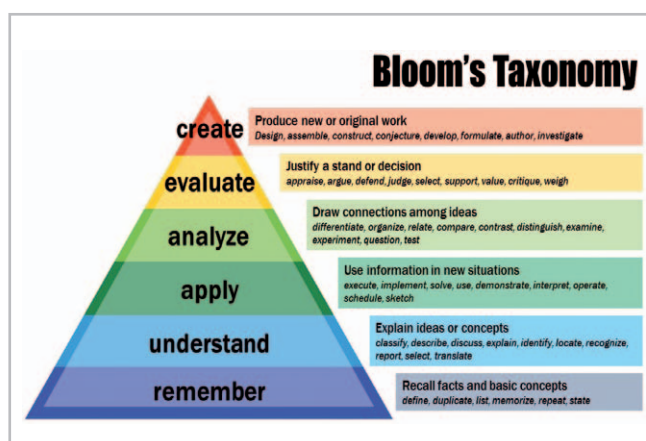
Artificial intelligence (AI) is increasingly capable of performing non-routine cognitive tasks, which were once the domain of humans. Consider self-driving cars which may hit the roads as early as 2020. Self-driving vehicles can operate round the clock unlike human drivers who are prone to exhaustion and as a result, give rise to road accidents. Self-driving vehicles are also likely to be more fuel efficient which saves costs. Would drivers in the transportation and logistics industry still be needed in the

future? The industry that we are familiar with today may be in for drastic changes.

Now, imagine the auditing industry. Will AI become powerful and reliable enough in the future to perform the audit work and issue audit opinions with or without minimal human intervention? Participants unanimously agreed that a distinguishing hallmark of the accountancy profession lies in its integrity, ethics and professionalism. In the next five years, more of the auditing work may be performed by AI under the auditor's oversight. However, compared to audit opinions issued by a robot, clients would have more trust if the audit opinions are issued by a human auditor. This is because the issuer has the attributes of integrity and professionalism which are the defining qualities of accountants.

Higher Order Thinking Skills For the Future

Singapore's education system is one of the top in the world. The Singapore education system is skewed towards rote learning which tested one's ability to remember, understand and apply. This was adequate in preparing the Singapore workforce to cope in structured and predictable environments of yesteryears. However, with today's volatile, unpredictable and complex environment, our workforce needs to develop higher order thinking skills to help them navigate the future.



Source: <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

With reference to the Bloom's Taxonomy, there is an increasing shift for accountants to be able to analyse, evaluate and create beyond merely applying accounting/auditing standards to their work. Accountants should integrate, examine and evaluate the relationships between financial and non-financial information and generate meaningful insights that will enhance business performance.

The participants expressed the view that while technology can help to comb through massive data and identify trends, there is a need for accountants to connect the dots by leveraging their financial knowledge to help businesses.

Better Understanding of Businesses

To be able to support strategic decision making in businesses, accountants need to have a working knowledge of other business functions such as marketing, operation and human resource to appreciate the business case and its accompany constraints. Accountants will increasingly need to work with non-financial data.

For example in a telecommunication company, accountants could use consumer behaviour data in the customer relationship management system to forecast how fast customers change their mobile plans. This has an impact on the company's revenue forecasts. Working with these data is outside the comfort zone of many accountants today. Business thinking, which uses accounting information, supplemented with other types of information, will be an important skill in future.

Social and Soft Skills Important for Socially Networked World

In our highly globally connected and interdependent world, accountants will increasingly find themselves working with people of different countries, cultures, religion and race. From a quiet bean counter tucked behind a table, the accountant of tomorrow should be a socially intelligent individual capable of connecting and engaging with others. This calls for the development of soft skills such as negotiation, leadership, teamwork and cross cultural competency.

Hearing from our Leaders of Tomorrow

The new generation of workforce (the Millennial workforce) are a completely different breed from the Gen X-ers and Baby Boomers. They are digital natives having grown up with the internet as their "playground". Their most prized possession is their smartphone (or smart devices) from which they communicate, be entertained, shop, read the news, all at their finger tips. They place importance on teamwork, collaboration and believe in doing good. They typically thrive well in unstructured environments, extremely tech-savvy and are very confident of themselves. Their ideas of work, the workplace, bosses and colleagues are vastly different from those of earlier generations.

Employers have to develop new engagement models that take into account the characteristics and needs of this new generation of workforce in order to motivate, engage and retain talented millennials at the workplace. What is more important for today's education model is to build up





transferable skills, like leadership skills, critical thinking and technology skills, to prepare students for future challenges. Moving into a future ready accountancy profession, there is a need to embrace changes and lifelong learning attitude.

“Our Future Together” conversation engaged the young to hear their thoughts about where they see the profession is headed to. This enables them to play a part in shaping their future. With this desire in mind, an exclusive students-only event was organised on 30 May, which was well attended by accountancy students from various Singapore universities. We have captured below the key insights on the future of the accountancy profession provided by Singapore’s accountancy undergraduates.

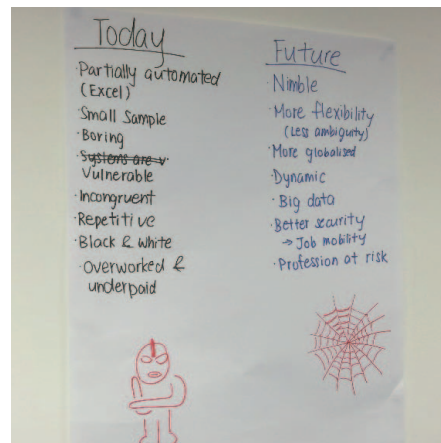
Accountants: From Ultraman to Spiderman

The students were asked to use metaphors to describe the accountancy profession today and 25 years from now.

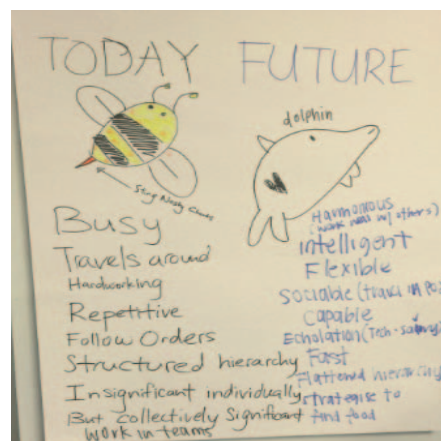
The students generally agreed that an accountancy degree was a well respected and versatile one. The accountancy degree helps to open doors, offering exciting career opportunities in different fields and industries. However, when asked where they would head to upon graduation, many students shared that they were not keen on joining the accounting firms.

Accountancy – Today

1. Ultraman: Like each Ultraman episode which is predictable, accounting is seen as repetitive. Accountants are perceived as boring, overworked, underpaid, impressionable and vulnerable. Nobody remembers Ultraman today.



2. Bee: Accountants are always busy as a bee and are seen as hardworking but performing repetitive tasks. There is a structured hierarchy in the organisation, especially in the accounting firms.

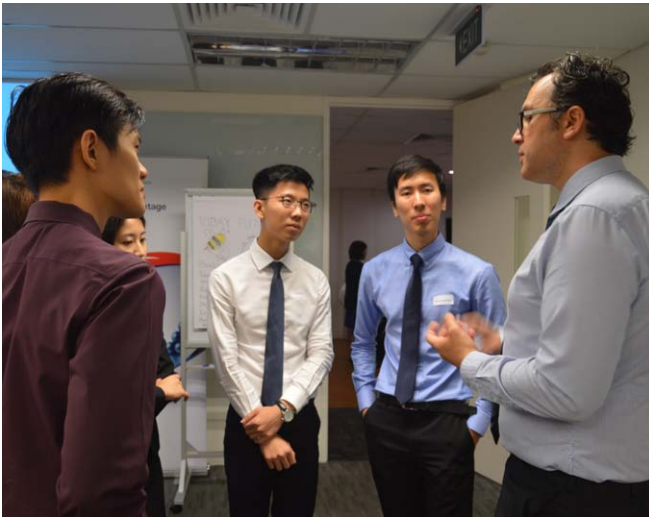


Accountancy - 25 years from now

1. Spiderman: Spiderman was a metaphor used to describe future accountants as nimble and flexible individuals. With the emergence of young minds and thinkers, accountants are also expected to become more dynamic, embrace job mobility and leverage on technology such as Big Data to enhance decision making.

2. Dolphin: Future accountants were likened to dolphins with its key attributes of being intelligent, sociable and able to work harmoniously with others. In the future, it is foreseen that accountants will engage in cognitive based work than routine based work.

New Strategy Needed: Talent Attraction and Retention



From the students' description of today's accountancy profession, the profession's image is in need of an overhaul in order to attract the young and talented. Accountants are perceived as boring, poorly paid and over-worked professionals, who are made to follow instructions in a highly rigid environment. Students cited their personal experience where they lacked the empowerment and room for creativity while pursuing their internships with the accounting firms.

Given that the accountancy profession is human capital intensive, the students felt that the profession should focus on people. The students highlighted that higher perceived trust from the supervisor typically led to higher job satisfaction. They desired the opportunity to learn under the supervision of a senior mentor, as well as gain exposure through interacting and proposing ideas to senior management. There is a strong desire to contribute, collaborate and be a valuable team member rather than just be a "cog in the machine".

With this poor perception of the industry, the accountancy sector especially the accounting firms face a real issue of talent drain. If there are no talents remaining in the accountancy profession, what is left of the future of the profession?

Cross-Disciplinary Education Broadens Perspectives

When asked how accountants can be future ready, the students saw a need for the accountancy degree curriculum to be broadened and include cross disciplinary subjects to prepare undergraduates for the future workplace. They suggested subjects like psychology, IT skills, human resource and history to be included in the

accountancy degree education. They cited the example of forensic audit where psychology gives the forensic auditor an edge in identifying a potential fraudster and in understanding the intent behind the numbers when accountants look deeper into fraud. HR skills will be useful to future accountants as they can play a role in redesigning jobs and performance management.

Millennial Accountants: Working in the Public Interest

Recognising that the accountancy profession acts in the public interest, the students saw potential for accountants to play a greater role in taking part and contributing to discussions that affect global developments. They pointed out that accountants can shape and influence discussions on areas like ageing population, global warming and income inequality. They also questioned what accountants can do to promote sustainable development and growth, how can accountants contribute back to the society and be more environmentally aware and responsible.



A Role for the Human Accountant Remains

"In the future, will only robots celebrate Labour Day?" asked Forbes in August 2014.

The progress of technology is both exciting and intimidating. What probably keeps most people awake at night is whether they would still wake up to a job tomorrow or would robots become the workforce of the future.

The students gave their verdict on the burning question that we have on the future of the accountancy profession.

"How likely are robots to replace the role of an accountant?"



Our young aspiring accountants were confident that technology will not fully replace the role of an accountant in the next 25 years. They envisioned accountants of the future to be sociable individuals to support their role as strategic partners and advisors to CEOs. Furthermore, while technology can take over the routine work in accounting and auditing, the students held the view that it would be challenging for technology to replace human judgement, an increasing valuable component of accounting work.

We heard the debate about the future of accountancy profession. We are heartened that our young accountants of tomorrow are thinking beyond the technical bits of the accounting world. The role of future accountants and their implications on the broader business and social communities are well on the minds of the young generation.

"I am very concerned of what would happen to the accountancy sector in the near future. The knowledge that I have learnt in school will definitely be relevant for the next 5 years. However, what about 10 years, 20 years down the road? I am considering to upgrade my knowledge about big data and business analytics so as to better equip myself in times of uncertainties and match the skill sets needed by the employers."

– Soo Jian Hao, Accountancy Student, Nanyang Technological University

"The accountancy profession has been in a dynamic flux with the advancement of technology in the recent decades. While some are pessimistic towards the possible wipe-out of jobs and disruption of traditional business models within the accountancy sector, many of us are optimistic towards the utilisation of technology to assist and improve the profession's efficiency and quality. While we remain rooted in the foundations of the discipline, we strive to be better in the dawn of evolution, riding on the waves of change, standing on the shoulders of giants."

– Derrick Kew, Accountancy Student, National University of Singapore

The Real Value of the Profession

Accountancy is a trusted profession and we must continuously find new ways to adapt and find new ways of adding value to businesses and our society. As borne out of “Our Future Together” conversation, there was unanimous consensus among participants that the real value of the profession lies in the integrity and ethics of accountants.

Accountants need to build from this position of strength which is based on ethics and trust, but remain adaptable to the changing demand of its services. This is true in the past, present and future.



Our Call to Action

In the words of Peter Drucker, "The best way to predict the future is to create it." Participants penned down a call to action that would positively shape the future of the accountancy profession after 1 June "Our Future Together" event.

"Our accountants must be innovative, versatile and resilient to thrive in this volatility, uncertainty, complexity and ambiguity (VUCA) world. We need to be proactive and imbued with a business mindset to be forward-looking instead of being compliant as such jobs are more efficiently and effectively taken over by the machines. As good communicators with a global mindset, we provide relevant information and partner with businesses to venture into new businesses and/or territories."

**Lee-Tan Lin, Deputy Director,
Business School, Singapore Polytechnic**

"The main event emphasised to me the urgent need to broaden and deepen the education provided for the professional accountants of tomorrow. I am currently teaching and developing new undergraduate courses, to be rolled out over the next two years. The challenge is to build core technical competence, develop higher level thinking skills and familiarise students with analytics and other technological changes."

The student event showcased the drive and creativity of Accountancy students from the local universities, highlighted for them the scope of the issues facing the profession, and appreciate how their education is preparing them for the future."

**Joanne Tay Siok Wan, Associate Professor,
School of Business, SIM University**

"We live in an age of disruptive technology and breakthrough innovation practices. Instead of shying away from these newfangled force multipliers, we should embrace them as opportunities to add value for our clients. The enhanced interconnectivity of our services will enable us to take a multi-disciplinary approach and deliver a full spectrum of client solutions."

**Frankie Chia, Managing Partner & International
Liaison Partner, BDO LLP**

"Technology and Big Data is playing an increasingly greater role in businesses. The accountant has to be strategic, creative, analytical, and data-savvy. The accountant must be able to visualize data, draw relationships from various sources, and present the data for decision-making and strategy formulation. Programming and coding may also be the norm one day. The computer language used is not important, but the skill to begin with the end in mind, the logical thought process, the mindset of crafting multiple creative scenarios, will ensure that the accountant is constantly looking for opportunities to lead innovation and drive performances."

**Anna Yap-Too Siew Hong, Director,
School of Business & Accountancy,
Ngee Ann Polytechnic**

"Accountancy is regarded as a safe profession that withstands economic cycles. But with the wave of digitalisation sweeping across every facet of business today, how do we future-proof ourselves and be ready for the transformation of our profession? Our continued relevance is squarely on how we can contribute to the business and assert our voice with management and the Board. Accountants must create that role for ourselves as businesses transform and proactively partner the business where we can add value. Whilst we are often the ballast providing the stability, calm and assurance to the enterprise and stakeholders, we must equally be innovative and venture our ideas into dimensions outside our comfort zone. We have to start thinking very differently."

**Christopher Wong, Partner,
Deputy Head of Assurance, Ernst & Young LLP**

"The future of the accountancy profession is not about greater familiarity with enterprise systems, more sophisticated IT audits, or higher reliance on advanced analytics. It is about the fundamental re-examination of the role of accountants – what exact value do we bring, how effective are we able to value add, and to what extent can technologies disintermediate these roles or execute such roles more comprehensively and intelligently than us. The ambiguity is not something to be fearful of. If we are willing to move out of our comfort zones to reinvent ourselves, this could be a rare opportunity for us to catch the next wave of tech innovation, possibly RegTech to lead in a new phase of growth for the accounting profession."*

**RegTech broadly refers to tech innovation in regulatory compliance, fraud prevention, and risk management.*

Sia Siew Kien, Director, Information Management Research Centre, Nanyang Business School, Nanyang Technological University

"Change is inevitable and fast brought about by disruptive technologies, innovative business models and an interconnected world, which hurls change at exponential speed. The accounting profession has to be masters of adapting and being flexible in its role. The human mind has capacity and intuition beyond our comprehension. The challenge is to push our abilities and boundaries beyond traditional mind sets to new areas - areas unexplored – to the extent of redefining the profession. We may not know what the future holds, but that should not stop us from imagining one outside our comfort zone. This is the time to do things differently and be bold about it. Not to do anything is not an option."

Ravi Arumugam, Chief Executive Officer & Managing Partner, RT LLP

"The future of the accounting profession can be bright. I encourage those who are starting a career in accounting to acquire future-ready skills such as expertise in business acumen, strategic planning and risk management. These skills can be achieved through mobility programs, or training programs that enhance your knowledge of industry developments. You will need to be familiar with the latest technology that will enable efficiency and deliver a high quality audit with valuable insights. This is key: technology will change how we do our work and challenge what we do. It has the potential to bring about transformational changes."

Shariq Barmaky, Audit Regional Managing Partner, Deloitte Southeast Asia

"Change is the only constant factor in our lives that we can count on. Thus we need to embrace changes and be prepared for that. Particularly in the accounting profession we need to prepare the company and the people to: understand and utilize today's technological advancement such as in computing power, big data analysis, and artificial intelligence, embrace social mobility and social media as a new way to do business, and last but not least to train and transform the professionals to be ready for the future with the right skill set. In short, to build an agile team with learning and adaptation capability."

Ronnie Ede, Chief Financial Officer, Biosensors International Group

"The accounting profession is changing rapidly due to digitalisation. The nature of accounting will change but the role of accountants will stay relevant. Accountants continue to play an important role in the business community as the economic system requires trust. The future requires a mindset change. Accountants need to develop business acumen and embrace innovations to stay future-ready as new business models evolve. Accountants must also continue to develop their analytical skills to handle complex business transactions across borders."

Seow Poh Sun, Associate Professor of Accounting (Education), Singapore Management University

"A shift to offer higher, differentiated value services is inevitable. I had shared four possible scenarios which may impact the accounting sector as a result of multiple tsunamis of technological advancement: good-enough online cloud based accounting services may dominate standard accounting services, augmented intelligence and analytics enable new ways of Accountants-machine collaborations, re-creation of new valued accounting services by embracing disruptive technologies like Blockchain, and business-as-usual incremental adoption of technologies in accounting practices. Accountants may risk losing their relevance if they still fail to recognise the rapid pace of changes in these four scenarios. If accountants transform themselves now, senior leadership will greatly benefit from their counsel as transformed financial and accounting leaders. The future is not in the future; it is now!"

Foong Sew Bun, IBM Distinguished Engineer and Lead Cloud Advisor, IBM Cloud

Acknowledgement

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Lee Chien Earn	Chief Executive Officer	Changi General Hospital
Foong Sew Bun	IBM Distinguished Engineer and Lead Cloud Advisor	IBM Cloud

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Our Future Together

ABOUT ISCA RESEARCH

ISCA Research identifies, explores and analyses the major issues driving today's business dynamics and shaping tomorrow's marketplace. We aim to closely monitor the accounting and auditing industry in order to provide an outlook for tomorrow.

ISCA Research is committed to participating in and supporting high quality research which is focused, timely, relevant and useful to the accountancy profession. We support the conduct of research with a global or local perspective. ISCA Research focuses our attention on continuously connecting with our members. Practitioners have numerous concerns and issues on their day-to-day practice. These may range from technical understanding to practical applications or even operational issues. A part of our research is directed at engaging our members to examine these practice matters and exploring practical solutions with them. The various ways that ISCA shows its commitment to the research arena includes partnering with business partners or interested parties and involvement in thought leadership activities. There will also be conferences held to feature and showcase the results of our research with our members and the public.

We will continuously seek comments from ISCA members through surveys to gather views from the CA (Singapore) community. Do send your comments to research@isca.org.sg

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